

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Queen Street VOC - Removal Polrep  
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region III

**Subject:** POLREP #4  
Final POLREP - Completion of Removal Site Evaluation  
Queen Street VOC  
A3YJ  
Martinsburg, WV  
Latitude: 39.4709920 Longitude: -77.9543280

**To:** Burns Fran, US EPA R3  
Response Center RRC, EPA  
Response Center RRC, EPA  
Tracy Jeffries, WVDEP

**From:** Michael Towle, On-Scene Coordinator

**Date:** 7/7/2016

**Reporting Period:** Through 7/7/2016

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	A3YJ	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	CERCLA	<b>Response Type:</b>	Time-Critical
<b>Response Lead:</b>	EPA	<b>Incident Category:</b>	Removal Assessment
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	12/2/2014	<b>Start Date:</b>	11/9/2014
<b>Demob Date:</b>	2/5/2016	<b>Completion Date:</b>	3/1/2016
<b>CERCLIS ID:</b>		<b>RCRIS ID:</b>	
<b>ERNS No.:</b>		<b>State Notification:</b>	
<b>FPN#:</b>		<b>Reimbursable Account #:</b>	

#### 1.1.1 Incident Category

This Site relates to a suspected release of chlorinated organic contamination in the area of a public drinking water supply.

#### 1.1.2 Site Description

The Site is near the location of a former leaking underground storage tank at a fuel station. After remediation of the leaking tank and following investigation, chlorinated organic (i.e., tetrachloroethylene) contamination was found in soil gas (ground water was not contemporaneously analyzed for the same

contamination). The State of West Virginia requested EPA assistance in determining the source and extent of contamination since contamination in the vicinity of the Site would likely affect a public drinking water supply.

#### **1.1.2.1 Location**

The Site is near the corner of North Queen Street and Lambert Street (now Cloud St.) in Martinsburg, Berkeley Co., WV.

#### **1.1.2.2 Description of Threat**

The Queen Street VOC site (Site) is an unknown source of possible chlorinated volatile organic compound (VOC) contamination suspected to be located near the intersection of North Queen Street and Lambert Street (currently named as Cloud Street), in Martinsburg, WV. The Site was discovered during the course of a Leaking Underground Storage Tank (LUST) investigation (LUST No. 98-034) at a gasoline station located near the intersection of North Queen Street and Lambert Street. The Site is located in a commercial area which includes a gasoline station/convenience store and retail strip mall to the north; a vacant grass lot and vacant business to the east; a restaurant to the south; and a farm supply store to the west across North Queen Street. It is suspected that tetrachlorethylene (PCE) may be migrating to the ground water (from an unknown source) and threatening public drinking water supply.

At this time, only low levels of contamination have been identified. The levels of contaminants do not warrant any further involvement of the EPA Removal Program and do not meet the criteria for Removal Action pursuant to the NCP.

#### **1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results**

Two 12,000-gallon underground storage tanks (UST), originally installed in 1964, were removed and replaced with new upgraded USTs at a nearby gasoline station in 1998. Petroleum contamination and perched water were encountered during the UST removal process. Approximately 674 tons of contaminated soil and 7,000 gallons of water were removed during cleanup activities. As a result, a State regulatory investigation was initiated under WV Leaking UST No. 98-034. Investigative activities related to the LUST included removal of identified subsurface soil and groundwater contamination consisting of petroleum hydrocarbons, including gasoline range organics (GRO), benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tert-butyl ether (MTBE). Additionally, analysis of soil gas samples indicated the presence of tetrachloroethene (a.k.a., PCE) in two of three soil gas samples in addition to the common gasoline-related constituents. PCE, which is not a gasoline-related constituent, was detected in soil gas samples collected in front of the Site building at concentrations as high as 3,700 parts per billion volume (ppbv) (approximately 546 micrograms per cubic meter [ $\mu\text{g}/\text{m}^3$ ]). Groundwater samples collected as part of the investigation had only been analyzed for gasoline-related constituents and had not been analyzed for PCE or other chlorinated solvents. The report prepared for the investigation indicated that groundwater at the Site flows generally to the west, northwest.

The Site is located in a Wellhead Protection Area. A Water Plant is located approximately 0.75 mile southwest of the Site and a public water source is located approximately 1.5 miles west of the Site.

Surface runoff from the area drains to the northwest, west, and southwest. A grass-covered storm water swale is located approximately 200 feet (ft.) west of the Site, across North Queen Street. The swale drains westward to a drain pipe that extends under the farm supply store parking area, and is believed to eventually empty into Dry Run at a location approximately 1,000 ft. southwest of the Site.

Previous investigations in the area have reported that bedrock is encountered at depths ranging from 5 to 12 ft. below ground surface (bgs). Boring logs for boreholes made during installation of monitoring wells (MWs) in 2010 depict void spaces at 11 to 12 ft. bgs (in MW-11) and at 10 to 14 ft. bgs (in MW-13). The boring log for another monitoring well (MW-12) indicated the presence of multiple clay-filled voids from near the surface to 29 ft. bgs. Depths to groundwater were reported to range between 7 and 20 ft. below tops of casings in the monitoring wells. Groundwater flow direction was reported as generally to the northwest. Consultants for the property owner surmised that contaminated groundwater from the Site had migrated off site through fractures in the bedrock.

In November 2014 EPA initiated a removal site evaluation at the Site focusing on sampling of some of the

existing ground water monitoring wells for VOCs. Validated analytical results indicated low level detections of several gasoline-related VOC constituents and other contaminants and only a trace level of PCE in one of the wells. Nearby soil gas also indicated low levels of PCE. Overall, the analytical results do not suggest a release of PCE to ground water that poses a threat which warrants action by the EPA Removal Program pursuant to the NCP.

See POLREPs 01 and 02 and 03 for available information.

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

See POLREPs 01 and 02 and 03 for a summary of activity relating to the removal site evaluation.

The data indicated the presence of low concentrations of petroleum/gasoline-related constituents in two of the three ground water wells sampled and detection of PCE at a trace level in one well. Results for MW-1 indicated the presence of MTBE at a concentration of 0.76 µg/L and also PCE at a concentration of 0.15 J µg/L, which is below the Contract Required Quantitation Limit (CRQL) of 0.5 µg/L. PCE was not found in other wells.

Soil gas results indicate the presence of low concentrations of several gasoline-related constituents and PCE in existing wells (the highest concentration detection was for PCE at 456 µg/m<sup>3</sup> . Analytical results for soil gas samples collected from the temporary implants indicated the presence of trace levels of PCE in the two sample locations nearest the northern property boundary (SV-02 and SV-03). SV-02 and SV-03 had PCE detected at concentrations of 1.6 µg/m<sup>3</sup> and 1.4 µg/m<sup>3</sup>, respectively. PCE was not detected in SV-01, which was located near the convenience store building.

The primary objectives of this investigation were to determine if groundwater had been impacted by non-petroleum related contaminants, such as PCE and its breakdown products, and to determine if a contaminant source area was present in subsurface soil. Analytical results for this sampling event confirmed the presence of a low level of PCE in soil gas well SG-3 at a concentration of 456 L µg/m<sup>3</sup>. This was somewhat lower than the highest PCE concentration reported in a soil gas sample collected from SG-3 in 2012 by contractors for the property owner (3,700 ppbv/546 µg/m<sup>3</sup>). PCE was only detected at trace levels in two of the three soil gas samples collected from temporary implants located near the northern property boundary (1.6 J and 1.4 J µg/m<sup>3</sup> in SV02 and SV03, respectively). PCE was only detected at a trace level in one of the three groundwater monitoring well samples, MW-1, at a concentration of 0.15 J µg/L. MW-1 is located near soil gas well SG-3. This result was below the CRQL of 0.5 µg/L and well below the 5 µg/L MCL and WV De Minimus concentration. PCE was not detected in any other groundwater sample for this event nor the December 2014 EPA sampling event.

The investigation-derived wastes consisted of non-hazardous purge waters and were transported from the Site to Valicor's Franklin, Ohio Facility on February 5, 2016.

Based on the analytical results for groundwater samples collected at this Site, it appears that PCE has migrated into the groundwater but only at a trace level with a limited horizontal extent of migration. Analytical results for soil gas samples collected as part of this investigation indicate the presence of low level PCE contamination in soil at or near SG-3. Only trace levels of PCE were detected in other soil gas sampling locations.

#### **2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

There is no activity to identify a PRP since the owner of the property is known.

#### **2.1.4 Progress Metrics**

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<b>Waste Stream</b>	<b>Medium</b>	<b>Quantity</b>	<b>Manifest #</b>	<b>Treatment</b>	<b>Disposal</b>
purge water - nonhazardous	ground water	55 gallons			

## 2.2 Planning Section

### 2.2.1 Anticipated Activities

#### 2.2.1.1 Planned Response Activities

None.

#### 2.2.1.2 Next Steps

None.

### 2.2.2 Issues

The analytical results do not indicate that PCE contamination has migrated at levels of concern for EPA Removal program. The removal site evaluation is concluded without finding that action by the EPA Removal Program is warranted pursuant to the NCP.

## 2.3 Logistics Section

No information available at this time.

## 2.4 Finance Section

### 2.4.1 Narrative

The work is conducted under the START contract (Techlaw, Inc.) under 2 separate TDDs:

- 1) 14-10-001 (closed)
- 2) 15-10-004 (closed)

### Estimated Costs \*

	<b>Budgeted</b>	<b>Total To Date</b>	<b>Remaining</b>	<b>% Remaining</b>
<b>Extramural Costs</b>				
TAT/START	\$43,283.90	\$27,831.73	\$15,452.17	35.70%
<b>Intramural Costs</b>				
<b>Total Site Costs</b>	\$43,283.90	\$27,831.73	\$15,452.17	35.70%

\* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this

report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

## **2.5 Other Command Staff**

No information available at this time.

## **3. Participating Entities**

No information available at this time.

## **4. Personnel On Site**

No information available at this time.

## **5. Definition of Terms**

No information available at this time.

## **6. Additional sources of information**

No information available at this time.

## **7. Situational Reference Materials**

No information available at this time.